CLMPTO 10/18/04 JW

Amend Claims 1-6

Claim 1 (Currently Amended) A convenience for voice telephones installed in a LAN comprising a LAN switching unit for switching and connecting a plurality of interfaces incorporated, and a plurality of LAN hubs accommodating equipment connected to the LAN switching unit via the interfaces, respectively, and for performing data communication over the LAN, said convenience comprising:

a LAN interface connected to the LAN switching unit;

at least one voice telephone; and

a at least one set or plural sets of voice telephone interfaces connected to the at least one or plurality of voice telephones juxtaposed with the equipment, wherein digital or analog voice data transmitted and received by the at least one set or plural sets of the telephone interfaces are converted into MAC frames or IP packets of a fixed length, and only the digital or analog voice data converted into the MAC frames or IP packets are relayed to the LAN interface side.

Claim 2 (Currently Amended) A convenience for voice telephones according to Claim 1, wherein further comprising:

a CPU; and

a second LAN interface for performing transmission and reception of data between a the CPU incorporated therein and one of the LAN hubs is provided in addition to the LAN interface connected to the LAN switching unit.

Claim 3 (Currently Amended) A convenience for voice telephone according to Claim 1, comprising a function of converting analog signals from circuits of analog telephone network subscribers are connected into call control protocols according to TCP / IP so as to be able to accommodate the analog telephone subscribers' terminals.

Claim 4 (Currently Amended) A convenience for voice telephone according to Claim 2, further comprising:

a CPU; and

a second LAN interface for performing transmission and reception of data with a the CPU incorporated therein, apart from the LAN interface connected to the LAN switching unit, having a function of converting and relaying the digital or analog voice data received from the plurality of at least one voice telephones accommodated therein is converted into TCP / IP packets or UDP / IP packets, and transmitting and receiving the TCP / IP packets or UDP / IP packets are transmitted and received via the second LAN interface.

Claim 5 (Currently Amended) A concentrator for voice telephones according to Claim 4, further comprising a router connected to the second LAN interface for connecting the second LAN interface to either the outside of the LAN or the LAN [illegible] option.

Claim 6. (Currently Amended) A method of communication over a LAN comprising a plurality of LAN hubs accommodating coupled to computing equipment for performing data communication, a plurality of the concentrators for coupled to voice telephones according to Claim 1, and a LAN switching unit, having a plurality of ports and for switching and connecting between the plurality of the LAN hubs, and the plurality of the concentrators for voice telephones, wherein the method comprising the step of:

performing call control [illegible] a plurality of the the voice telephones [illegible] coupled to each of the concentrators for voice telephones [illegible] a PC or work station [illegible] with the computing equipment in each of the LAN hubs wherein the case that a message from a PC or work station on the call in side is not [illegible], arrival of a call request is notified, and the response is detected by use of control channel signals of a voice telephone interface on the call in side.

Cancel Claims 7-9

Add New Claims 10-22

Claim 10 (New) A telecommunication apparatus for voice telephones installed in a LAN including a plurality of LAN equipment, the telecommunication apparatus comprising:

at least one LAN interface coupled to the LAN equipment;

a CPU;

at least one voice telephone;

a set of voice telephone interfaces adapted to receive and transmit digital and analog voice data or call control data between the CPU and the at least one voice telephone, wherein the CPU is adapted to convert the digital and analog voice data or call control data into IP packets or MAC frames and transmit the IP packets or MAC frames to the at least one LAN interface wherein the set of voice telephone interfaces are adapted to perform a BORSCHT function.

Claim 11 (New) The telecommunication apparatus of claim 10, further comprising a router connected to at least one LAN interface and to a LAN hub or outside of the LAN.

Claim 12 (New) The telecommunication apparatus of claim 10, wherein the LAN equipment includes one of a LAN hub and a LAN switching unit.

Claim 12 (New) The telecommunications apparatus of claim 10, further comprising a LAN chip coupled to the CPU and voice telephone interface for assembling and disassembling a MAC frame.

Claim 14 (New) The telecommunications apparatus of claim 10, wherein the call control data are converted into a call control protocol according to TCP/IP.

Claim 15 (New) A telecommunication apparatus for voice telephone installed in a LAN including a plurality of LAN equipment, the telecommunication apparatus comprising:

at least one LAN interface coupled to the LAN equipment;

a CPU;

at least one voice telephone;

a set of voice telephone interfaces adapted to receive and transmit digital and analog voice data or call control data between the CPU and the at least one voice telephone, wherein the CPU is adapted to convert the digital and analog voice data or call control data into TCP/IP packets or UDP/IP packets and transmit the packets to the at least one LAN interface.

Claim 18 (New) The telecommunications apparatus of claim 15, further comprising a router connected to the at least one LAN interface and to a LAN hub.

Claim 17 (New) The telecommunications apparatus of claim 15, further comprising a router connected to the at least one LAN interface and to an external network.

Claim 18 (New) A method of communication over a LAN, comprising:

receiving and transmitting digital and analog voice data or call control data between a voice telephone interface and a voice telephone;

receiving and transmitting the digital and analog voice data or call control data between the voice telephone interface and a CPU;

converting the digital and analog voice data or call control data into IP packets or MAC frames with the CPU; and

transmitting the IP packets or MAC frames from the CPU to a LAN interface.

Claim 19 (New) The method of claim 18, further comprising transmitting the IP packets or MAC frames from the LAN interface to a router.

Claim 20 (New) The method of claim 18, further comprising transmitting the IP packets or MAC frames from the router to an external network.

Claim 21 (New) The method of claim 18, further comprising transmitting the IP packets or MAC frames to a LAN hub.

Claim 21 (New): The method of claim 18, further comprising converting the digital and analog voice data into TCP/IP packets or GSM/IP packets with the CPU.